National Capital Region
Geographic Information Systems
Regional Technical Support Center

The National Park Service uses Geographic Information Systems (GIS) as a tool for park management and research. Many parks have their own GIS offices, but additional assistance is needed to help park managers perform GIS related tasks.

The NCR GIS Regional Technical Support Center (RTSC) is a regional NPS office located in the program Office of Lands, Resources, and Planning, and is geared towards assisting the parks in GIS related matters. The National Capital Region (NCR) consists of 68,711 acres of park land that make up 13 National Park Units that span the states of Maryland, Virginia, West Virginia and the District of Columbia. The geography of the region is very diverse. NCR encompasses everything from the downtown urban parks to battlefields to Piedmont forest.

We have expanded the use of GIS into every field of management, from cultural resources to planning, from natural resources to land use issues and from maintenance to law enforcement. These are just a few of the areas we are using GIS, but we are finding new uses daily.

Land Status Mapping

The Lands office is in the process of converting their hand drawn Land Status maps to a digital format. In an effort to assist them the RTSC converted the individual tract maps for Suitland Parkway into a digital Land Status Map. This involved the creation of 487 parcels using the legal descriptions from titles and deedsby hand using Coordinated Geometry (COGO). A database, the Master Deed List (MDL), was created to accompany the parcel data, which houses information about the original ownership of each parcel and details of the transaction between NPS and the Individual landowner. This mapping was done in AutoCAD, but was converted to GIS for distribution and park use.

United States Park Police

For years the RTSC has aided park police in mapping ARPA violations, crimes, accidents, helicopter landing sites, event planning, and various other incidents. Recently, USPP has decided to establish a GIS support office under their communications branch. The RTSC is helping them gather the expertise and equipment needed.

Inventory and Monitoring Program

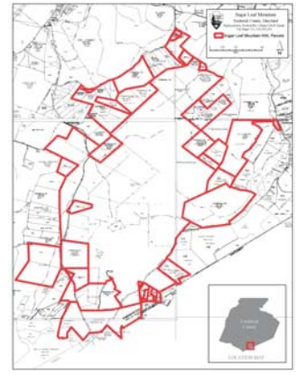
To support the I&M Program the RTSC has converted all available USGS data from its native format a Arc/Info format and converted it to the appropriate coordinate system. All data, park, county, and USGS has been incorporated into the NPS I&M Browser and distributed to the I&M Data Manager and the parks. We continue to support I&M by providing assistance in additional data acquisition, technical support, and QA/QC of contracted studies.

Planning & General Management Plans

The National Capital Region is going through an unprecedented era in planning. We are currently conducting eight General Management Plans/Environmental Impact Statements in the region. All plans are incorporating GIS throughout the planning process. We are also providing services to Washington, DC's Office of Planning for the Anacostia Waterfront Initiative, a $900,000 planning effort.

National Natural Landmarks Program (NNL)

The NNL program is designed for the preservation of "sites that illustrate the geological and ecological character of the United States". The ownership of these sites include local, state, tribal, federal and private landowners. In the past it has been difficult to determine who the landowners are for each NNL, due to inaccurate boundaries and lack of ownership information. The RTSC has been assisting this program in converting old pencil sketches of NNL sites to GIS quality maps that have accurate boundaries and landowner information. This process involves the scanning, registration, and vectorization of county tax maps. As well as the creation of a landowner database that links to each parcel. Thus allowing the program to query a set of polygons to determine which landowners are part of the NNL site. This allows the program to keep track of parcels inside the NNL and to communicate with property owners effectively. Currently we have completed 10 sites and are working on 4 others.



Incident Mapping

NCR provided incident support for this year's Fourth of July celebration, attended by nearly 250,000 people. This required the RTSC to coordinate with multiple agencies from numerous jurisdictions to provide for visitor safety at the request of the Administration. These maps detailed the locations of security checkpoints, fencing, and road closures, and ten published in both the Washington Post and Washington Times.

Mapping assistance was provided on NCR wildfires and two GIS Specialists responded to two large wildfire incidents to provide GIS support. They spent four weeks helping process data and create maps for the Biscuit Fire, the largest fire in recent Oregon history.

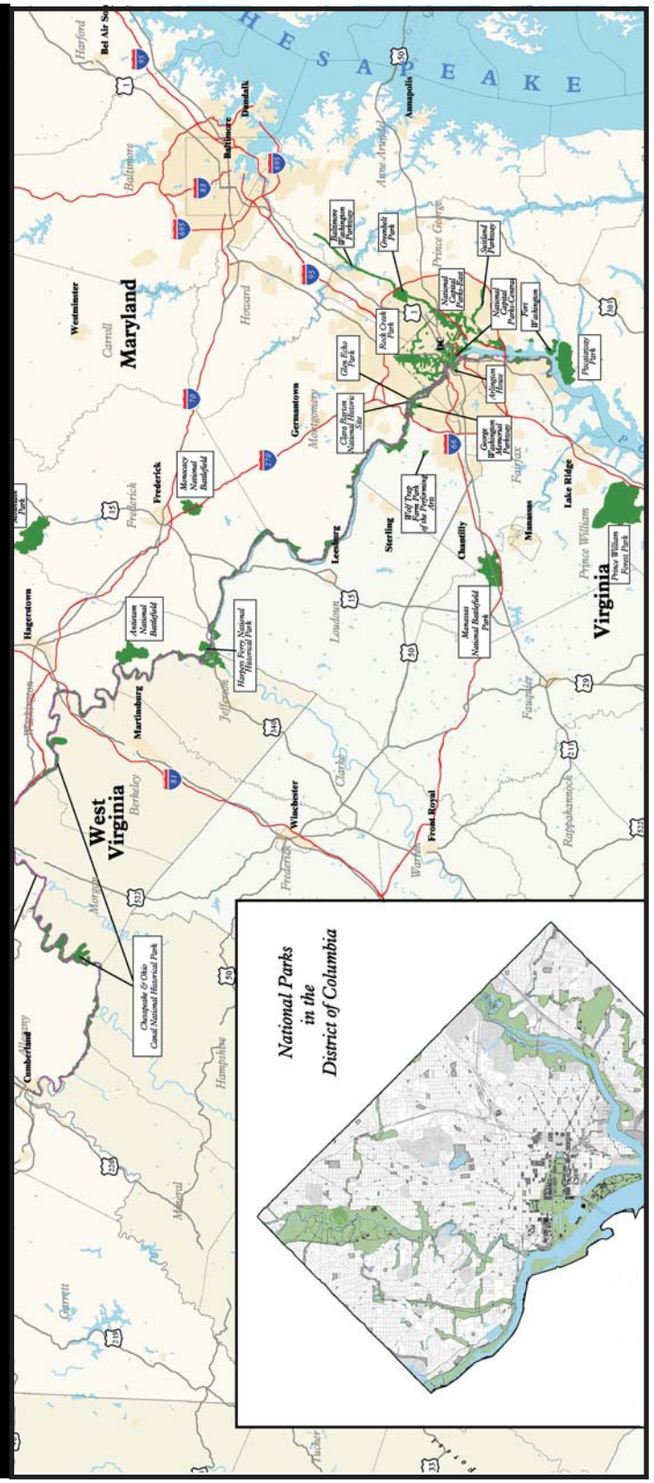
Training

Every year the RTSC sponsors 2 ArcView Training classes, which are taught by an ESRI certified trainer from Cultural Resources GIS. Since doing this the number of ArcView users has jumped dramatically. We have trained, Superintendents, Assistant Superintendents, and staff from Cultural and Natural Resources, Archaeology, Maintenance, and Rangers.

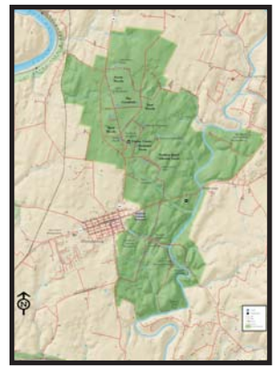
The RTSC also provides a 2 day GPS training several times a year. This has helped park staff get seasonal and temporary staff trained in GPS which has enriched the park's GIS program.

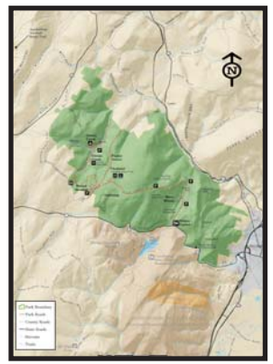
National Capital Region Park GIS Contacts

National Capital Region
Geographic Information Systems
Field Technical Support Center



Antietam National Battlefield
Debbie Cohen (301) 432-6236



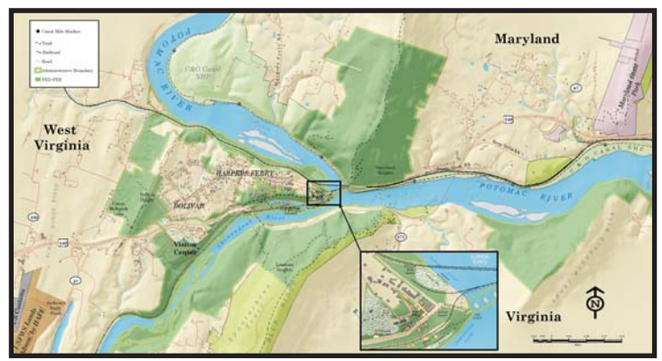


Catoctin Mountain Park
Jim Voigt (301) 416-0536

C&O Canal National Historical Park
Marie Sauter (301) 714-2224

George Washington Memorial Parkway
Barry Wood (703)289-2543

Harpers Ferry National Historical Park
Bill Hebb (304)535-6038



Manassas Battlefield Park
Bryan Gorsira (703)745-1859

National Capital Parks-Central
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Wolf Trap Park
for the Performing Arts

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